Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Office of Secretary Of Defense	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 2: *Applied Research*	R-1 ITEM NOMENCLATURE PE 0602250D8Z: *Systems 2020 Applied Research*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	0.000	7.898	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P209: *Systems 2020 Applied Research*	-	0.000	7.898	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Systems 2020 will set the technical foundation for the Department's system needs for the next decade. This initiative funds Office of the Secretary of Defense and Service research and development efforts in key technologies and tools for design and development of complex systems. The program seeks to develop enabling technologies that will support the rise of a new class of adaptable systems, and will spawn a new generation of engineering tools and markets that could revolutionize systems engineering practice.

Systems 2020 research initiatives will investigate advanced engineering technologies and provide experimental platforms to assess the feasibility of proposed solutions. These areas include: (1) Multi-dimensional, multi-feature design and engineering tradespace analysis approaches computed rapidly, accurately and within an integrated environment; (2) Techniques to generate multiple alternative designs with data structures enabling modeling of lifecycle implications such as producibility and sustainability; and (3) Novel decision-making techniques that interface engineering and operational data and inputs while guarding against premature or stovepiped design choices. Together these efforts address opportunities to improve system adaptability and will develop techniques to balance design choices against costs for future adaptation precipitated by unexpected threats, changing missions, and disruptive technologies, while operating with far greater speed and agility.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	7.898	1.903	-	1.903
Current President's Budget	0.000	7.898	0.000	-	0.000
Total Adjustments	0.000	0.000	-1.903	-	-1.903
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Baseline Adjustment	-	-	-1.903	-	-1.903

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Change Summary Explanation

Baseline adjustments are reflective of DoD priorities and requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 2: *Applied Research*	R-1 ITEM NOMENCLATURE PE 0602250D8Z: *Systems 2020 Applied Research*	PROJECT P209: *Systems 2020 Applied Research*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
P209: *Systems 2020 Applied Research*	-	0.000	7.898	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Systems 2020 research initiatives will investigate advanced engineering technologies and provide experimental platforms to assess the feasibility of proposed solutions. These areas include: (1) Multi-dimensional, multi-feature design and engineering tradespace analysis approaches computed rapidly, accurately and within an integrated environment; (2) Techniques to generate multiple alternative designs with data structures enabling modeling of lifecycle implications such as producibility and sustainability; and (3) Novel decision-making techniques that interface engineering and operational data and inputs while guarding against premature or stovepiped design choices. Together these efforts address opportunities to improve system adaptability and will develop techniques to balance design choices against costs for future adaptation precipitated by unexpected threats, changing missions, and disruptive technologies, while operating with far greater speed and agility.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Systems 2020 Applied Research	0.000	7.898	0.000
Description: Systems 2020 research initiatives will investigate advanced engineering technologies and provide experimental platforms to assess the feasibility of proposed solutions. These areas include: (1) Multi-dimensional, multi-feature design and engineering tradespace analysis approaches computed rapidly, accurately and within an integrated environment; (2) Techniques to generate multiple alternative designs with data structures enabling modeling of lifecycle implications such as producibility and sustainability; and (3) Novel decision-making techniques that interface engineering and operational data and inputs while guarding against premature or stovepiped design choices. ***FY 2013 Plans:*** -Conduct Systems 2020 research projects, coordinate with the Services' science and technology leadership and the Service's research, development and engineering centers. Integrate Services' pilot project results and data. Coordinate research agenda with outside agencies such as the National Institute of Science and Technology, and the National Science Foundation. -Perform applied research to enable implementation of candidate Systems 2020 tools, technologies and methods in an integrated laboratory demonstration and evaluation of initial capabilities to accelerate delivery of complex adaptive systems. -Perform applied research to enable implementation of candidate Systems 2020 systems analysis and design engineering tools in an integrated laboratory demonstration that performs within a wide range of architectures and design drivers in the context of dynamic mission and threat conditions.			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 2: *Applied Research*	R-1 ITEM NOMENCLATURE PE 0602250D8Z: *Systems 2020 Applied Research*	PROJECT P209: *Systems 2020 Applied Research*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
-Perform applied research to enable implementation of Systems 2020 tools that mature a concept-engineering and integrated modeling environment that enables rapid assessment of new material, increases productivity of engineering, design and production processes, and readily incorporates a wide range of mission data for generation of design alternatives. -Perform applied research to enable implementation of candidate Systems 2020 tools, technologies and methods in an integrated laboratory demonstration and evaluation of initial capabilities to accelerate delivery of complex adaptive systems. -Perform applied research to enable implementation of candidate Systems 2020 systems analysis and design engineering tools in an integrated laboratory demonstration that performs within a wide range of architectures and design drivers in the context of dynamic mission and threat conditions. -Perform applied research to enable implementation of Systems 2020 tools that mature a concept-engineering and integrated modeling environment that enables rapid assessment of new material, increases productivity of engineering, design and production processes, and readily incorporates a wide range of mission data for generation of design alternatives.			
Accomplishments/Planned Programs Subtotals	0.000	7.898	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A